

THE UNCREATED ENERGIES – THE SPIRITUAL FOUNDATION OF KNOWLEDGE

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ABSTRACT:

BY THE ORTHODOX TEACHING'S POINT OF VIEW ON THE UNCREATED ENERGIES, THE SCIENCE HAS THE POSSIBILITY TO BE SPIRITUALLY SUBSTANTIATED. AS FAR BACK AS THE PATRISTIC EPOCH, THE THEOLOGY SPEAKS OF THE INWARD RATIONALITY OF CREATION BACKED UP BY THE UNCREATED ENERGIES, BY WHICH THE WORLD CAN BE GATHERED IN MAN AND LIFTED TO THE HIGHEST LEVEL OF ITS EXISTENCE, TO ITS BEING TRANSFIGURED INTO A NEW HEAVEN AND A NEW EARTH. THE MICROSCOPIC WORLD IS FOUND AT THE BASIS OF THE VISIBLE MATERIAL WORLD, BUT BY KNOWING IT, THE SCIENCE HAS EXACTLY DISCOVERED THIS RATIONALITY. IN ACCORDANCE WITH EINSTEIN DISCOVERY CONCERNING THE HIERARCHY OF THE PHYSICS LAWS, THE UNIVERSE'S RATIONALITY GOES BEYOND ITS MANIFESTATION DESCRIBED WITH THE HELP OF THE LAWS OF SYMMETRY, OF FINALITY, OF CAUSE AND EFFECT, ALL OF WHICH ARE CONSPICUOUS AT THE MACROSCOPIC LEVEL; IT WAS THIS REALITY WHICH HAS INDUCED THE MEN OF SCIENCE TO ASSERT THAT THIS IS THE WORK OF GOD'S MIND.

KEYWORDS: THE UNCREATED ENERGIES, RATIONALITY, THE QUANTUM PHYSICS, THE THEORY OF RELATIVITY, MACROSCOPIC SCALE, MICROSCOPIC LEVEL, THE UNCERTAINTY PRINCIPLE, FULFILLMENTS, EPECTHESIS.

THE ROLE OF CHRISTENDOM IN THE DEVELOPMENT OF SCIENCE²

The eastern Christianity has always led the humanity to her liberation from the determinism of natural and cosmic laws which stand at the basis of the myth of eternal return from the pantheistic and dualistic religions of antiquity, thus allowing the appearance of the vast scientific and technical progress of today's humanity. By preaching the teaching on the spiritually pure, eternal and transcendental Being of God, the Christianity has led human reason to the partial desacralization of nature, to the abolition of idolatry which was advocated by the entire ancient world and generalized by the heathen religions, and has permitted the knowledge, the utilization and the preservation of creation which has been made to be bestowed to the man, who had the destiny to spiritualize and humanize it after Christ's model Who has transfigured in Himself the man and the cosmos.³ The Christianity

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² See, also, my study *Energiile necreate – fundamentul spiritual al cunoașterii*, „Revista de Teologie Sfântul Apostol Andrei”, anul XI (2007), Nr. 1.

³ Pr. Prof. Dr. Dumitru Popescu, *Ortodoxie și contemporaneitate*, „Editura Diogene,” București, 1996, p. 158-159.

offers us the possibility to assimilate the universe in our being by God's presence and His work in the creation by the agency of the uncreated divine energies.

But today, as much as in the ancient world, God's existence and the soul's immortality are a priori posited and they must be placed at the basis of the scientific researches. It is asserted that the rational arguments cannot awaken the faith into an atheist; yet they may strengthen and justify it for the faithful. The reason's limits are shown especially in front of miracles and prophesy which cannot be explained by anything but by faith. However, sometimes neither even the miracles are able to make an atheist to believe; but if he manifests a sincere openness as compared to the truth and desires to uncover it, then the miracles are the best means to awakening the faith and uncovering the truth. There is no shame for an intellectual or for a serious scholar to find out that his theses are erroneous; for such an individual, it would be a reason for joy to find out about other theories, closer to the truth, which shall help him to elucidate the mysteries which are worrying him. "Karl Popper has claimed that a true scholar must always attempt at refuting his own hypothesis."⁴ This must be the ultimate norm of the deontology of researchers and scholars. "Nothing honor a scholar more than calling a spade a spade, that is, as he is being led by the sense of his intellectual researches."⁵

Due to our discursive, limited thinking, only the dialectical search allows us to evolve on a scientific plan. Wherefore, "the disputes are always constructive. One may deceive oneself; another one may correct him/her. No hypothesis may be prohibited, and no hypothesis is useless. All of them are offered to the research and the researcher stops at the one which seems to him/her to be true, or, anyhow, plausible. No one must be condemned for his personal options, when they are sincere and honestly sought for. But, one must not lose sight of the fact that his options are personal, since there is no general option. St. Paul the Apostle exhorted: „Receive one who is weak in the faith, but not to disputes over doubtful things” (Romans 14, 1).⁶

B. THE NECESSITY OF SCIENTIFIC AND TECHNOLOGICAL DEVELOPMENT OF THE HUMANITY FOR HER MATERIAL AND SPIRITUAL LIFE.

In analyzing various scientific discoveries which, on one hand, present the complexity of the world created by God, and, on the other hand, may offer solutions to the various requirements and necessities of the contemporary and forthcoming human society, such as, the energetic crisis, the genetic diseases, we have to conclude that the scientific and technological development is necessary for the welfare of humanity. The quantum physics and the theory of relativity have decisively contributed to the development of technique to its present-day forms.

But the first important steps taken by the science in order for the man to be able to begin his work of liberating from the chains of relativity have not been taken when Einstein has defined his theory; they have been taken when Galileo Galilei has invented the telescope and showed its first application in the year 1609⁷, and Giambattista Odierna has invented the microscope in the year 1644⁸, with the help of which, Marcelo Malpighi, in the year 1660, has discovered the microscopic structure of the lungs, by demonstrating the value of the new

⁴ ***, *O constatare senzațională, dar controversată, care ar putea produce o adevărată „schimbare de civilizație”*. *Apa are propria ei memorie*, „Magazin Nord-Est,” year I (15-21 june, 1995), nr. 15, 13.

⁵ Mgr. Gheorghe Drăgulin, *Ortodoxia în teologia contemporană*, „Ortodoxia,” anul XI (1959), nr. 1, 148.

⁶ Antonie Plămădeală, *Tâlcuri noi la texte vechi*, „Tiparul Tipografiei Eparhiale Sibiu,” Sibiu, 1989, 269.

⁷ Alexander Hellemans, Bryan Bunch, *Istoria descoperirilor științifice*, „Editurile Orizonturi și Lider”, București, 1988, 120; vezi și <http://ro.wikipedia.org/wiki/Telescop>.

⁸ <http://en.wikipedia.org/wiki/Microscope>.

working instrument in biology and chemistry⁹. With the help of these redoubtable instruments, scholars have succeeded to partially know *the things in themselves*¹⁰ (*das ding an sich*), their microscopic physical side, and have opened the doors for the perspectives of the quantum physics which have been accomplished in the twentieth century.

The great theories of the present-day physics have an important role both in the conserving of the world's existence and of man's, and in its being led to new stages of development. Thus, Albert Einstein has discovered the *theory of relativity* and has very much contributed to the discovery of the *quantum mechanics*,¹¹ but these things have not satisfied him due exactly to the revelation of the caducity of the material world. Any material creature is made up of atoms found in a permanent moving state which takes place in huge void spaces as compared to the atoms dimensions. This means that the creatures, for their greatest part, consist of void spaces. The microscopic particles give cohesion to the things only due to their unceasing dynamism around the nucleus which exerts an attracting force. The matter, under all its forms of aggregation, is made up of energetic particles, which are into a continuous movement in a void space.

These particles have short life duration, disappearing in the nothingness of which they have come out, but not before some others have come out in an equally magic way to the way by which the previous ones have disappeared. We cannot stay impassible in front of such a discovery which reconfirms the intuition of genius of the Holy Fathers. This time we are reminded of St. Justin who, while speaking of the world's cause and its created character, says that the world is such a solid, resistant, and dense body, and it changes itself by disappearing and being born each and every day, nevertheless.¹² In order for them to explain this phenomenon, the men of science, who have in view to preserve the autonomy of creation in comparison with God, have emitted the hypothesis of anti-particles' existence as the source for the particles' appearance. The last innovation of the autonomous science with respect to the way of appearance of the elementary particles is the assertion that they appear by the agency of the bosons nicknamed "the God particles."

In passing over all these theories, we want to emphasize that the creatures are founded on these particles which have a short existence and which bring the men of science on the horns of a dilemma, since some are prone to call them creatures, also, because the microscopic universe is to them more real than the macroscopic universe.¹³ "In each point of the creation the matter was never anything but a servile slave and dominated everywhere by the sovereignty of the forces that are steering it."¹⁴ The firmness of the rock is based not on a dense composition of stable material particles; it is based on dynamic particles which manifest themselves in a void space, and this proves the dynamic character of all creatures, grounded on the energetic structure of the matter, on the presence of some forces which come from a continuous source of existence and movement.

Einstein has understood why the man cannot easily dominate the matter, namely because, although he possesses a complexity which is hard to describe, it does not have

⁹ Alexander Hellemans, Bryan Bunch, *Istoria descoperirilor științifice*, „Editurile Orizonturi și Lider”, București, 1988, p. 145; vezi și <http://en.wikipedia.org/wiki/Microscope>.

¹⁰ Jeanne Hersch, *Mirarea filozofică. Istoria filozofiei europene*, trad. de Drăgan Vasile, (București: „Editura Humanitas”, 1997), 181.

¹¹ Stephen W. Hawking, *Visul lui Einstein și alte eseuri*, (București: „Editura Humanitas”, 1997), 77.

¹² Sf. Justin Martirul și Filosoful, *Dialogul cu iudeul Trifon*, 5, 2, at Pr. Prof. Dr. Ioan G. Coman, *Patrologie, vol. I*, (București: „Editura Institutului Biblic și de Misiune al Bisericii Ortodoxe Române,” 1984), 301.

¹³ Kitty Ferguson, *The fire in the equations: science, religion, and the search for God*, („Templeton Foundation Press,” Philadelphia and London, 2004), 5.

¹⁴ Camille Flammarion, *Dumnezeu în natură*, trad. de Arhiereul Irineu Mihălcescu Târgovișteanu, (București „Editura Aurom”, 1997), 37.

stability, and is not eternal. Even the physical laws must be framed into a hierarchy, since some of them are valid at a certain level, while others start acting at another level, superior to the others. Wherefore, it is said that “Einstein has not proved that ‘Newton has deceived himself:’ he has transcended Newton’s theory, by including it in something deeper and with greater applicability,” and because of this it is deemed that, it would have been better suited for the theory of relativity to be called the theory of invariant.¹⁵ If we go higher on the stages of knowledge, our perspective is more complete, supplying us a better understanding of the things’ interconnection, and amazingly broadening our horizon.¹⁶

This is how one could explain why he lived the second half of his life while looking vainly to realize a unified theory by which this thicket of material particles could be controlled and thus the world to be understood in its totality.¹⁷ This theory could not be ever defined, due to apparent contradiction between the microscopic world, characterized by a fantastic contingency, and the macroscopic one, which evinces an amazing rationality, a fact which made Einstein to assert that the only incomprehensible thing as far as the world is concerned is the fact that it can be comprehended.¹⁸ On the other hand, Einstein has discovered another one, the one of probability, by which he had in view, to some extent, the explanation of the connection between phenomenons at the microscopic level, and their supervision. This last theory has laid at the basis of the subsequent development of the data processing science, by which there have been possible the present-day fulfillments of the human civilization, such as the development of the spatial navigation, of the automating, and of robotics.

The Einstein’s step is not novel and it was not forgotten to the present-day; it was taken over by some other restless spirits, eager after the exhaustive knowledge of the seen world, that were ignoring the fact that the infinite God works in the world and offers it infinite potentialities. “Descartes, and the modern science, all at once with him, considers that the interpretation of (reality, our note), may be replaced by the data accumulation (it is a displacement from the *teleological* method to the *eutaxiological* one, a step visible at Hawking, also: “the final goal of science is to give a single theory which describes the entire universe”¹⁹).²⁰

But the man is much more a complex creature than this, and this reality is discovered only by the faith teaching through which the action of the divine grace’s work enters into action, grace which is able to unify all in God. “The contemporary science leads us to the frontiers found between science, faiths and ethics. Some dream about a vast unifying synthesis between the present-day science and the mystical and religious traditions. Yet, instead of succumbing to a concord or a syncretism full of confusion, it is rather necessary to attain to a true dialogue between the great cultural traditions: science, religion, etc... The

¹⁵ Martin Res, *Doar șase numere. Forțele fundamentale care modelează universul*, (București: “Editura Humanitas,” 2000), 48.

¹⁶ Julian Barbour, *The End of Time*, „Weidenfeld & Nicolson,” 1999, after Martin Rees, *Doar șase numere*, 49.

¹⁷ Stephen W. Hawking, *Visul lui Einstein și alte eseuri*, 77-78.

¹⁸ Ian C. Barbour, *Când știința întâlnește religia. Adversare, străine, sau partenere?*, (București: „Editura Curtea Veche”, 2006), 89.

¹⁹ See Stephen W. Hawking, *Scurtă istorie a timpului. De la Big Bang la găurile negre*, „Editura Humanitas”, București, 1995, pp. 24-28, at Doru Costache, *Istoria recentă, actualitatea și perspectivele raporturilor între teologie și reprezentarea științifică a lumii*, in Pr. Prof. Dr. Dumitru Popescu, *Știință & Teologie. Preliminarii pentru dialog*, (București: „Editura XXI: Eonul dogmatic”, 2001), 39.

²⁰ Doru Costache, *Istoria recentă, actualitatea și perspectivele raporturilor între teologie și reprezentarea științifică a lumii*, in Pr. Prof. Dr. Dumitru Popescu, *Știință & Teologie. Preliminarii pentru dialog*, (București: „Editura XXI: Eonul dogmatic”, 2001), 39.

contemporary epistemology has quite clearly shown that the very science involves the faith dimension.”²¹

The science gives oneself airs. Our attainments bestow on us pride, gravity, and we have the tendency to rely only on ourselves, without any more appealing to God. The more we identify quicker our knowledge's errors, the more we are closer to the truth. The faith teaching does not signify anything to those who consider themselves wise in accordance with the wisdom of this world, while to those who are pure in their heart the whole work of God in the creation is discovered until, united to Him in the life hereafter, they attain to knowing Him into an ascending form, into a perpetual epecthesis.

The dynamics of indetermination and of cosmos' order,²² which fascinates the modern science, was anticipated by the Holy Fathers, who have spoken about the rationality of creation, of whom we are reminded, particularly, of St. Maximos the Confessor, who asserts: “Who is the one who knows the reasons of things as they are and how they are differentiated and have an unmoved stability by nature, and an unchanging movement between them, having the stability on the move and the move on the stability, which is such an astounding thing? Who knows which one is the relation between them of the contrary things toward the making up of a single world, and which one is the kind of the move and of the well ordered and unmixed steering?”²³

It ensues from all of these researches that there exist three categories of laws. The theory of relativity is applied on a macroscopic scale, in connection with the space and the time, thus revealing to the man not only the universe's relativity, but the present-day life of man, which is directly dependent on the forces and moves of the heavenly bodies with slower or faster speeds.²⁴ In contrast with this, the Newton's physics is applied to the terrestrial plan – the one of man's existence – and the quantum physics is applied to the microscopic level and it contains, also, the uncertainty principle discovered by Heisenberg, in accordance with which there cannot ever be measured simultaneously the position and the speed of a particle, due to the observer's influence, based on his instruments' help, on the energy and on its move,²⁵ that which confers inconsistency to the world, also, at the macroscopic level, since the history of each particle may influence the history of the entire complex of the world, while ensuring that the causality and the finality are dependent on an infinity of invisible, microscopic factors.²⁶ Moreover, “the famous law of direct causality seems to be no longer valid in the small infinite in which the physicians have uncovered micro-particles, the behavior of which eludes this law.”²⁷

In order for one to unify all of these aspects of the world, the only valuable theory needed should have been the Newtonian theory, which is perfect from a theoretical point of view, but which, we barely now understand, due to the relativity discovered by Einstein, may be applied only in a perfect physical world. We do know today that there are different laws for each level of the physical world – microcosm, terrestrial, macrocosm – and which have been discovered and accepted by the entire humankind with great difficulties, since the humanity was running after the absolute and this running leads to the desecrating of the last

²¹ Jean-Pierre Lonchamp, *Science et croyance*, (Paris: „Ed. Desclee de Brouwer”, 1992), 8-9.

²² Jean-Pierre Lonchamp, *Știință și credință*, (București: “Editura XXI: Eonul dogmatic”, 2003), 145-148.

²³ Sf. Maxim Mărturisitorul, *Ambigua, tâlcuiri ale unor locuri cu multe și adânci înțelesuri din Sfinții Dionisie Areopagitul și Grigorie Teologul*, colecția *Părinți și Scriitori bisericești*, vol. 80, (București: „Editura Institutului Biblic și de Misiune al Bisericii Ortodoxe Române,”1983), 204.

²⁴ Martin Rees, *Doar șase numere*, 48.

²⁵ Stephen W. Hawking, *Visul lui Einstein și alte eseuri*, 85.

²⁶ Kitty Ferguson, *The fire in the equations*, 15-16.

²⁷ Prof. K. Blaser, *Doctrine de Dieu. Guide des principaux aspects de la question*, Curs dactilografiat, 1979-1980, 45.

frontiers of the world, in order for it to discover that the true nature of God is purely spiritual and absolutely different from every kind of thing which belongs to this world.

On the other hand, the uncertainty principle demonstrates the essential limits of the knowledge power of man,²⁸ and the necessity of an over-rational, intuitive knowledge, grounded on the act of faith. Thus, the quantum physics has led to comprehending the fact that the consummate representation of the world cannot be exclusively scientific, the men of science being, hence, called, also, to a dialogue with some other knowledge forms, to “the creation of a relation between microphysics and philosophy,” owing to the ultimate questions posed by the physics.²⁹

...And so, the man sees himself forced into coming back to the classical ways of knowledge, which are founded on complementarity between sciences and the faith in God. ”By the announcement of the death of metaphysics, which was accomplished by Kant, some have believed that, in this situation, the philosophy dies. But the metaphysics which was condemned by Kant was made in the main by the scholastic preoccupation, with the general concepts, which was domineering in the Western Middle Age, as realism in theology. Consequently, it did not have a substantial relation with the Greek metaphysics, which was always organically connected to physics. And this was happening because there has not existed in the ancient Greek philosophy a separation between theory and fact and, equally significant, the philosophy was not done in order for it to damage the sciences, since it was not independent at all. Those who do not make these distinctions quickly fall in the pitfall of the results they reach. They consider the metaphysics as a search of the *reality thereafter*, by researching the concepts in themselves and, consequently, under current conditions, metaphysics is incomprehensible.”³⁰

The quantum physics has discovered the paradoxical structure of *light* which is simultaneously both wave (the spiritual side) and corpuscle (the material side); yet, it could not demonstrate how the relation between them takes place. The light has given voice to the world, has lately said the researchers, that is, the photon is the first particle that appeared in the universe by which the other particles have appeared, also. The discovery – by the scientific research – of the internal logical order of the matter, which surpasses the opposition between the nature and the spirit, has made some scholars to speak about electron as about a Spirit “bearer,” things which have been anticipated by the Revelation and expressed in a theological language, that is, “the world was created by the Logos,” Who gave it, also, an internal rationality as a structure of the matter.³¹

Starting from the structure of light, Erwin Schrödinger avails himself of the same laws of physics and defines the life as spirit and matter.³² He points out that, as the physics science cannot demonstrate the relation which exists between the wave and the corpuscle in the light’s structure, in the same way the relation which exists between the matter and the spirit cannot be demonstrated, and, as such, the life is an extraordinary antinomy for the science.³³ Thus, the life notion which is understood by the science as being a double reality, spirit and

²⁸ Pr. Prep. Dr. Răzvan Andrei Ionescu, Lect. Dr. Adrian Nicole Lemeni, *Teologie Ortodoxă și Știință. Repere pentru dialog*, („Editura Institutului Biblic și de Misiune al Bisericii Ortodoxe Române,” București, 2006), 375.

²⁹ C.F. von Weysacker, *The World View of Physics*, („Editura Routledge,” London, 1952), 35-36, apud Pr. Prep. Dr. Răzvan Andrei Ionescu, Lect. Dr. Adrian Nicolae Lemeni, *Teologie Ortodoxă și Știință. Repere pentru dialog*, 368-369.

³⁰ Nikos Matsoukas, *Introducere în gnoseologia teologică*, (București: „Editura Bizantină”, 1997), 48.

³¹ Pr. Tache Sterea, *Dumnezeu, omul și creația în teologia ortodoxă și în preocupările ecumenismului contemporan. Teză de doctorat. Partea a II-a*, „Ortodoxia,” anul XLIX (1998), nr. 3-4, 157.

³² Apud Pr. Drd. Ioan Popescu, *Structuri tematice cu implicații în gândirea teologică după gândirea lui Erwin Schrodinger: „Ce este viața? Și spirit și materie,”* „Studii Teologice,” an XLIII (1991), nr. 4, 140.

³³ Popescu, *Structuri tematice cu implicații în gândirea teologică....*

matter, confirms the Hebrew term *chaim*, which has a dual sense, in as much as it refers to the visible-material aspect, and to the invisible-spiritual one, a significance which we may report to the two worlds, the visible one and the invisible one. And the quantum science has demonstrated that there could be two worlds in the same space and time.

Besides the discovery of these fascinating realities on the complex subatomic world, which edifies the man on the existence in general, the quantum physics shows its importance for the man, also, by the fact that it has allowed him to get to the discovery of the two procedures by which the atoms could be used as new sources of energy, namely, in the nuclear fission and fusion. In the context of contemporary world, in which the pollution of nature represents the more a danger to man, because of the utilization of fossil fuels, the two procedures of producing energy are much more than saving. Someone said that there is no energetic crisis, but a technologic one, since the energy can be obtained through very many ways, but not only by the classical ones; yet, the lack of technology is what makes us to reach an energetic deadlock. By using the nuclear energy, the present-day man may secure the long lasting function of all of the technical creations necessary in life.

“The matter! ... Lately the men of science have discovered one of greatest mysteries of nature: the atomic energy. In a kilogram of uranium is stored so much energy so that piece of metal is able to bear a huge passenger ship across the ocean. Now, try and imagine if you can, how much energy is inside the entire matter from the globe, or how much in the sun, or in the billions of stars and galaxies which are seen in the universe, or which have not been discovered as yet. And all of these have been made by God.”³⁴

And the discovery of the new microscopic particles and the using of the quantum physics offer the man the possibility to study procedures more and more efficient for the producing of the energy which is necessary to realize the most grandiose plans for humanity, as the spatial flights of long duration.

Another providential fulfillment could be the deciphering of the thorough map of the *genetic code of man*. This fulfillment could be used to root out some diseases which are considered incurable up until now.³⁵ Of course, it could lead to contingent ethical side-slipping, as the human cloning,³⁶ a fact because of which the secular authorities have a great responsibility in the observance of the ethics and of the man’s personality. “A science without foundation and without ethical applications is in all cases ill-starred to the man and culture,” as says a Catholic theologian, who reminds us of Bacon who asserted that science without conscience is tantamount to the ruin of the soul and of the universe, since, if we consider that the man is a being made up exclusively of matter, then we depreciate the very essence of his nature.³⁷

Likewise, starting from the map of human genome, some of man’s behaviors could be corrected, both at the individual level and at the social level. In this direction have already appeared researchers who have given birth to a new science, the science of socio-biology, which has in view to fulfill a systematic study on the biological bases of any forms of social behavior.³⁸

³⁴ Pr. Dr. Ștefan Slevocă, *Din tezaurul ortodoxiei în apărarea credinței străbune*, (Buzău: „Editura Episcopiei Buzăului,” 1990), 122.

³⁵ Constantin Maximilian, Ștefan M. Milcu, Sylvain Poenaru, *Fascinația imposibilului. Bioetica*, (București: „Editura pentru tineret și sport – Editis,” 1994), 144.

³⁶ Poenaru, *Fascinația imposibilului. Bioetica ...*, 51-53.

³⁷ Cardinalul Paul Poupard, *Credință și cultură la cumpăna dintre milenii*, („Editura Galaxia Gutenberg,” 2005), 161.

³⁸ Jean-Pierre Lonchamp, *Știință și credință*, 150.

C. THE PERSPECTIVES OF SCIENTIFIC AND TECHNOLOGICAL DEVELOPMENT OF HUMANITY.

All of these fulfillments of the human scientific genius have been possible by God's providence, and they have a great utility both for the knowledge and the preservation of the integrity of the whole world, and for its promoting, for developing it in new forms more and more complex which are supposed to secure the progress of man and of his physical necessities, both of the present-day ones and of those who succeed us. They have not been fulfilled in a short period of time; they have been fulfilled in a long period, depending both on the necessities of the epoch in which they have lived, but particularly, depending on their spiritual evolution, especially after the salvation fulfilled in Jesus Christ through the Holy Spirit.

The Heisenberg principle of uncertainty helps to overcome the means for measuring the material world characteristics (tools invented by man, as his sense organs), particularly at the microscopic level, thus we are coming back to the starting point, at the comprehending the importance of knowledge by faith, by reasonable calculations, founded on mental understanding, through predictions, as Stephen Hawking loves saying³⁹. Therefore, the cognizance is called in the Orthodox theology good faith, also (see Isaiah, 11,2), being, many times, a purely spiritual work, since it is not founded on experiment data.

In this way, the thing in itself may be known by faith, also, and sometimes this is necessary, as it was demonstrated by Heisenberg, in order for it to not influence the internal quantum structure of things. The fact ensues, also, from the saints' experience which tells us that, in order for one to have enjoyed the possibility of consummate knowledge of the things, it is necessary for one to transcend the creation, the union with God by His grace which eternally emanates from His Being.

The uncreated divine energies are the energies which eternally emanate from the divine Being, with the goal of manifesting It outside of It, as the perfect Being that is not closed in Itself. They are responsible for everything which God creates outside of His Being, in the *oikonomia* plan, first the eternal divine plan for the creation of the world, followed by its application, the bringing of it to the accomplishment in the act of creation, and continued by the divine Providence up until to the final transfiguration of the world and the deification of man. The divine grace is the special work of the uncreated divine energies the goal of which is the salvation of humanity.

The uncreated energies are ontologically tied to the divine Persons and have as goal Their work in the created world, both at the level of personal beings and at the level of impersonal beings, in one word, at the level of all the kingdoms. The uncreated divine energies irradiate from the divine Being and take care of the creation as a whole, and the grace has a precise goal, the one of saving the mankind, while being shared to man by the deified humanity of Christ. "The plenitude It contains (the Church, the note of the author) is the grace, *the profoundness of the divine energies*, by which and for which the world was created."⁴⁰

In the case of man, if the body is made out of earth, and the soul is created by the breathing of the Lord, the uncreated grace is placed by God in the man's being, as His inner work which ties the man to the Three personal Being of God. He bestows on man the character of free person, character which represents the image of God in man and implies, also, the possibility of his continuous actualization by attaining to the God's likeness.

³⁹ Stephen W. Hawking, *Visul lui Einstein și alte eseuri*, 72.

⁴⁰ Prof. Nicolae Chițescu, Pr. Prof. Isidor Todoran, Pr. Prof. Ion Petreună, *Teologie Dogmatică și Simbolică*, vol. II, (București: „Editura Institutului Biblic și de Misiune al Bisericii Ortodoxe Române”, 1958), 775.

By the agency of the uncreated energies, the Holy Trinity is made manifest in the world by actualizing the potencies with which the world was endowed. This is why the Fathers of the Church have reached the conclusion that “the entire creation is a threefold reflex of Trinity.”⁴¹ The uncreated divine energies do not exist in themselves, detachable from God, but they perpetually spring from the divine Being, thus they are being the work and the testimony of the Trinitarian Persons’ presence. “The uncreated energies are the divine forces by which the Trinity descends to the world in order for It to lift the world to the communion of eternal life of the Holy Trinity.”⁴² God the Father enters in relation with the created world through the Son and the Holy Spirit, “the two hands of God”⁴³ which works by the agency of the uncreated energies, the ways of God’s manifestation in His relation to the world.⁴⁴

This is all we can pretend as creatures, since God’s Being is inaccessible to us, seeing that we cannot overcome our statute of creatures with a temporal beginning and limited in space, unlike the eternal and infinite God by His purely spiritual Being. He may now be better comprehended by knowing the material universe at whose discovery, it seems to us, we are just at the beginning, since the complexity of the sub-atomic world as well as the immensity of the macroscopic universe overcome by far our ability of comprehending and particularly of mastering them.

At the same time, it is required for us to accept that we cannot talk about a particle of God’s Being, since God is not compound. In fact, a particle of God’s Being is identical with the whole, and this contains, also, everything which is created by His uncreated divine energies. Accordingly, the boson cannot be considered as something being part and parcel of His infinite, eternal and inaccessible Being except for the uncreated energies. Not even the last ones could be caught, seen by the microscope, because they have, also, a purely spiritual structure as is the case with the Being of God.

Despite all of these, God’s existence is more real than our existence; yet, we, in our nothingness, nurture the impression that only our world is real and that God does not even exist, only because we gained some material senses with the help of which we endeavor to know the entire reality and to believe that we shall succeed in doing that, even though they could be easily annihilated or deceived. It is hard to believe that so many human beings think that this world and their earthly life are the most real things possible as long as they end with death beyond which the profane science – so-called pure science – is unable to explain to us what follows.

Therefore, our senses, as well as our mind, are limited. And God has created this world which is so complex in order for us realize, little by little, in the course of discovering it, and to recognize our impotence while facing the creation and its mysteries and to discover God, its Creator and Providence provider, not as a created energy or something else palpable, but as a power and uncreated energy which cannot be analyzed at all, neither surprised by the senses, but understood as the only explanation of the spiritual nature of the apparition of creation and its existence, starting with the sub-atomic particles which do compose it and

⁴¹ Vezi Bernhard Philibert, *Der Dreieine. Anfang und Sein. Die Struktur der Schöpfung*, Christians Verlag, Stein am Rhein, Schweiz, 1971, p. 21-24, după Pr. Prof. Dr. Dumitru Stăniloae, *Teologie Dogmatică Ortodoxă, vol. I*, (București: „Editura Institutului Biblic și de Misiune al Bisericii Ortodoxe Române”, 1978), 288.

⁴² Pr. Prof. Dr. Dumitru Popescu, *Ortodoxie și contemporaneitate*, 14.

⁴³ Sf. Irineu de Lyon, *Adversus haereses*, 5, 18, 2, după Pr. Prof. Dr. Ioan G. Coman, *Patrologie, vol. II*, (București: „Editura Institutului Biblic și de Misiune al Bisericii Ortodoxe Române,” 1985), 34; vezi și Vladimir Lossky, *Introducere în Teologia Ortodoxă*, trad. de Lidia și Remus Rus, (București: "Editura Enciclopedică", 1993), 71.

⁴⁴ Drd. Vasile Citirigă, *Transfigurarea creștinului prin lucrarea harului Sfântului Duh*, “Studii Teologice”, an. XXXIV (1982), nr. 5-6., 348.

concluding with the comprehending of the spiritual meanings of the macroscopic world, by and large, as well as of each creature as a separate part, animated or not, which exist in this world.

We are still unable at the planetary level, we have great deficiencies in keeping the ecological equilibrium, in preserving the creation and of recycling, and so much as we cannot afford to do many things. We do not know quite sufficient of the creation laws which always uncover to us some of its novel facets which astound us, so that, we, as human beings, cannot fully consider ourselves as stewards and masters of creation. ”Source of knowledge is the research object. Today, the research object, unlimited and global, is permanently more and more enlarged, both in its microscopic and its macroscopic dimension, so much so that the sciences are forced, while facing such a great extension, to break this object and to create more and more specialties.”⁴⁵

There are a lot of philosophies in the world, old and novel, which are partially right, depending on their starting principles, but they prove to be impotent while trying to overcome the domain in which they are currently acting, since the created world is very complex and always offers surprises to the man who is searching it. But not even one philosophy has reached the level of knowledge of the Orthodox theology which speaks about the presence and the work of God in the whole creation by the agency of the divine uncreated energies which make up the only explanation of how the world has appeared and functions, and the only system, in philosophical terms, which embraces the creation at all the levels and provides explanations for the existence and functioning or the living of all creatures from it. By the Orthodox teaching’s point of view on the uncreated energies, the science has the possibility to be spiritually substantiated. As far back as the patristic epoch, the theology speaks of the inward rationality of creation backed up by the uncreated energies, by which the world can be gathered in man and lifted to the highest level of its existence, to its being transfigured into a new heaven and a new earth. The microscopic world is found at the basis of the visible material world, but by knowing it, the science has exactly discovered this rationality. In accordance with Einstein discovery concerning the hierarchy of the physics laws, the universe’s rationality goes beyond its manifestation described with the help of the laws of symmetry, of finality, of cause and effect, all of which are conspicuous at the macroscopic level; it was this reality which has induced the men of science to assert that this is the work of God’s Mind.

⁴⁵ Nikos Matsoukas, *Introducere în gnoseologia teologică*, 39-40.

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